

0	For receiving Office use only	
0-1	International Application No.	
0-2	International Filing Date	
0-3	Name of receiving Office and "PCT International Application"	
0-4	Form PCT/RO/101 PCT Request	
0-4-1	Prepared Using	PCT-SAFE [EASY model] Version 3.51.002.177 MT/FOP 20060101/0.20.4rc.2.7
0-5	Petition The undersigned requests that the present international application be processed according to the Patent Cooperation Treaty	
0-6	Receiving Office (specified by the applicant)	Japan Patent Office (RO/JP)
0-7	Applicant's or agent's file reference	2004S01199
I	Title of Invention	METHOD AND APPARATUS FOR DETECTING CRATER END OF CONTINUOUSLY CAST PRODUCT, AND METHOD FOR PRODUCT CONTINUOUSLY CAST PRODUCT
II	Applicant	
II-1	This person is	applicant only
II-2	Applicant for	all designated States except US
II-4	Name	JFE STEEL CORPORATION
II-5	Address	2-3, Uchisaiwai-cho 2-chome, Chiyoda-ku, Tokyo 1000011 Japan
II-6	State of nationality	JP
II-7	State of residence	JP
II-8	Telephone No.	81-3-3597-3439
II-9	Facsimile No.	81-3-3597-3445

III-1	Applicant and/or inventor	
III-1-1	This person is	applicant and inventor
III-1-2	Applicant for	US only
III-1-4	Name (LAST, First)	IIZUKA, Yukinori
III-1-5	Address	c/o JFE R&D CORPORATION, 1-1, Minami-wataridacho, Kawasaki-ku, Kawasaki-shi, Kanagawa 2100855 Japan
III-1-6	State of nationality	JP
III-1-7	State of residence	JP
III-2	Applicant and/or inventor	
III-2-1	This person is	applicant and inventor
III-2-2	Applicant for	US only
III-2-4	Name (LAST, First)	KUBOTA, Jun
III-2-5	Address	c/o Intellectual Property Dept., JFE STEEL CORPORATION, 2-3, Uchisaiwaicho 2-chome, Chiyoda-ku, Tokyo 1000011 Japan
III-2-6	State of nationality	JP
III-2-7	State of residence	JP
III-3	Applicant and/or inventor	
III-3-1	This person is	applicant and inventor
III-3-2	Applicant for	US only
III-3-4	Name (LAST, First)	TSUTSUMI, Koichi
III-3-5	Address	c/o Intellectual Property Dept., JFE STEEL CORPORATION, 2-3, Uchisaiwaicho 2-chome, Chiyoda-ku, Tokyo 1000011 Japan
III-3-6	State of nationality	JP
III-3-7	State of residence	JP

IV-1	Agent or common representative; or address for correspondence The person identified below is hereby/ has been appointed to act on behalf of the applicant(s) before the competent International Authorities as:	agent
IV-1-1	Name (LAST, First)	OCHIAI, Kenichiro
IV-1-2	Address	c/o Patent Application Dept., JFE TECHNO-RESEARCH CORPORATION, 1-2, Marunouchi 1-chome, Chiyoda-ku, Tokyo 1000005 Japan
IV-1-3	Telephone No.	03-3201-4882
IV-1-4	Facsimile No.	03-3201-4860
V	DESIGNATIONS	
V-1	The filing of this request constitutes under Rule 4.9(a), the designation of all Contracting States bound by the PCT on the international filing date, for the grant of every kind of protection available and, where applicable, for the grant of both regional and national patents.	
VI-1	Priority claim of earlier national application	
VI-1-1	Filing date	27 November 2003 (27.11.2003)
VI-1-2	Number	2003-396827
VI-1-3	Country	JP
VI-2	Priority document request The receiving Office is requested to prepare and transmit to the International Bureau a certified copy of the earlier application(s) identified above as item(s):	VI-1
VII-1	International Searching Authority Chosen	Japan Patent Office (ISA/JP)

VIII	Declarations	Number of declarations	
VIII-1	Declaration as to the identity of the inventor	-	
VIII-2	Declaration as to the applicant's entitlement, as at the international filing date, to apply for and be granted a patent	-	
VIII-3	Declaration as to the applicant's entitlement, as at the international filing date, to claim the priority of the earlier application	-	
VIII-4	Declaration of inventorship (only for the purposes of the designation of the United States of America)	-	
VIII-5	Declaration as to non-prejudicial disclosures or exceptions to lack of novelty	-	
IX	Check list	number of sheets	electronic file(s) attached
IX-1	Request (including declaration sheets)	5	✓
IX-2	Description	32	-
IX-3	Claims	5	-
IX-4	Abstract	1	✓
IX-5	Drawings	8	-
IX-7	TOTAL	51	
	Accompanying items	paper document(s) attached	electronic file(s) attached
IX-8	Fee calculation sheet	✓	-
IX-9	Original separate power of attorney	✓	-
IX-17	PCT-SAFE physical media	-	✓
IX-18	other	##### ####	
IX-18	other	##### #	
IX-19	Figure of the drawings which should accompany the abstract	1	
IX-20	Language of filing of the international application	Japanese	
X-1	Signature of applicant, agent or common representative		
X-1-1	Name (LAST, First)	OCHIAI, Kenichiro	
X-1-2	Name of signatory		
X-1-3	Capacity		

Paper Copy (NOT for submission)

10-1	Date of actual receipt of the purported international application	
10-2	Drawings:	
10-2-1	Received	
10-2-2	Not received	
10-3	Corrected date of actual receipt due to later but timely received papers or drawings completing the purported international application	
10-4	Date of timely receipt of the required corrections under PCT Article 11(2)	
10-5	International Searching Authority	ISA/JP
10-6	Transmittal of search copy delayed until search fee is paid	

FOR INTERNATIONAL BUREAU USE ONLY

11-1	Date of receipt of the record copy by the International Bureau	
------	--	--